

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 2	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
0051		See Block 16C					
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CPOD							
US Environmental Protection Agency							
26 West Martin Luther King Drive							
Mail Code: NWD							
Cincinnati OH 45268							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
JACOBS TECHNOLOGY INC.				9A. AMENDMENT OF SOLICITATION NO.			
Attn: Robert Norfleet				9B. DATED (SEE ITEM 11)			
600 WILLIAM NORTHERN BLVD.							
P.O. BOX 884							
(b)(4)				x 10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-C-15-008			
				10B. DATED (SEE ITEM 13)			
				03/20/2015			
CODE 007923014		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) Mutual Agreement of the Parties						
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not. <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007923014							
Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina							
Max Expire Date: 09/30/2019							
1) The purpose of this Modification is to update Clause H-25 EPAAR 1552.237-72 KEY PERSONNEL. (APR 1984). Specifically, this Modification updates the "P4 Safety Officer" and the "P4 Quality Assurance Officer," as requested by the contractor by e-mail to the undersigned Contracting Officer on 3/13/2018.							
2) Except for the changes identified above, as further detailed below, all other contract terms and conditions remain unchanged.							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Keith Pfeffer			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		03/20/2018	

**CONTINUATION SHEET**

 REFERENCE NO. OF DOCUMENT BEING CONTINUED  
 EP-C-15-008/0051

PAGE 2 OF 2

 NAME OF OFFEROR OR CONTRACTOR  
 JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>--</p> <p>H-25 EPAAR 1552.237-72 KEY PERSONNEL. (APR 1984)</p> <p>(a) The Contractor shall assign to this contract the following key personnel:</p> <p>P4 Program Manager: (b)(4)</p> <p>P4 Safety Officer: (b)(4)</p> <p>P4 Quality Assurance Officer: (b)(4)</p> <p>(b) During the first ninety (90) days of performance, the Contractor shall make no substitutions of key personnel unless the substitution is necessitated by illness, death, or termination of employment. The Contractor shall notify the Contracting Officer within 15 calendar days after the occurrence of any of these events and provide the information required by paragraph (c) of this clause. After the initial 90-day period, the Contractor shall submit the information required by paragraph (c) to the Contracting Officer at least 15 days prior to making any permanent substitutions.</p> <p>(c) The Contractor shall provide a detailed explanation of the circumstances necessitating the proposed substitutions, complete resumes for the proposed substitutes, and any additional information requested by the Contracting Officer. Proposed substitutes should have comparable qualifications to those of the persons being replaced. The Contracting Officer will notify the Contractor within 15 calendar days after receipt of all required information of the decision on substitutions. This clause will be modified to reflect any approved changes of key personnel.</p> <p>--</p> <p>Payment:</p> <p>RTP Finance Center                      US Environmental Protection Agency                      RTP-Finance Center                      Mail Drop D143-02                      109 TW Alexander Drive                      Durham NC 27711</p>				



<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1      4	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00052		See Block 16C		PR-ORD-18-00954			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CPOD							
US Environmental Protection Agency							
26 West Martin Luther King Drive							
Mail Code: NWD							
Cincinnati OH 45268							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				10A. MODIFICATION OF CONTRACT/ORDER NO.			
JACOBS TECHNOLOGY INC.				EP-C-15-008			
Attn: Robert Norfleet							
600 WILLIAM NORTHERN BLVD.							
P.O. BOX 884							
(b)(4)				x			
TULLAHOMA TN 373880884				10B. DATED (SEE ITEM 13)			
				03/20/2015			
CODE 007923014		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$100,000.00	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) Unilateral - Limitation of Funds						
<b>E. IMPORTANT:</b> Contractor <input type="checkbox"/> is not. <input checked="" type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007923014							
Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina							
Max Expire Date: 09/30/2019							
1) The purpose of this Modification is to provide incremental funding for Option Period 3. See attached Recapitulation of Funds sheet for details, as well as the below.							
2) Except for these changes, all other contract terms and conditions remain unchanged.							
OPTION PERIOD 3							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Keith Pfeffer			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		04/04/2018	
NSN 7540-01-152-8070				STANDARD FORM 30 (REV. 10-83)			
Previous edition unusable				Prescribed by GSA			
				FAR (48 CFR) 53.243			

## CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
EP-C-15-008/P00052PAGE OF  
2 4NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is obligated from estimated cost. Funds in the amount of (b)(4) are provided to cover the corresponding increment of fixed fee. The total cost plus fixed fee obligated is \$100,000.00. The amount allotted for costs is estimated to cover the contractors performance through 7/8/2018.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>LIST OF CHANGES:</p> <p>Reason for Modification: Funding Only Action</p> <p>Total Amount for this Modification: \$100,000.00</p> <p>Obligated Amount for this Modification: \$100,000.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 4</p> <p>Obligated Amount for this Modification: \$100,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK8-2532-26A5C-1826CFE019-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK8 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826CFE019-001 Quantity: 0 Amount: \$100,000.00</p> <p>Delivery: 03/31/2019 Delivery Location Code: CPOD CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Continued ...</p>				

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Cincinnati OH 45268 USA  Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711				

## Recapitulation of Funds

Contractor: JACOBS  
Contract No.: EP-C-15-008

## Recapitulation of Funding

### Option Period 3 - From 04/01/2018 to 03/31/2019

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Modification 0045	(b)(4)	(b)(4)	\$908,522.89
Modification 0046			\$0.00
Modification 0047			1,173,530.35
Modification 0048			-183,604.00
<b>Modification 0052</b>			100,000.00
<b>Total Funded</b>			<b>\$1,998,449.24</b>
<b>Total Per Contract</b>			<b>\$7,402,005.00</b>
<b>Balance Unfunded</b>			<b>\$5,403,555.76</b>



<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES 1 9	
2. AMENDMENT/MODIFICATION NO. P00053		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO. See Schedule		5. PROJECT NO. (If applicable)	
6. ISSUED BY CP0D US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268		CODE CP0D		7. ADMINISTERED BY (If other than Item 6)  		CODE	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)  JACOBS TECHNOLOGY INC. Attn: Robert Norfleet 600 WILLIAM NORTHERN BLVD. P.O. BOX 884 (b)(4) TULLAHOMA TN 373880884  CODE 007923014 FACILITY CODE				(x)		9A. AMENDMENT OF SOLICITATION NO.	
						9B. DATED (SEE ITEM 11)	
				x		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-15-008	
						10B. DATED (SEE ITEM 13) 03/20/2015	
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required) See Schedule				Net Increase:		\$1,343,609.41	
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE		A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.					
		B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).					
		C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:					
X		D. OTHER (Specify type of modification and authority) Unilateral - Limitation of Funds					
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not. <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.) DUNS Number: 007923014 Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina Max Expire Date: 09/30/2019 1) The purpose of this Modification is to provide incremental funding for Option Period 3. See attached Recapitulation of Funds sheet for details, as well as the below.  2) Except for these changes, all other contract terms and conditions remain unchanged.  OPTION PERIOD 3  Continued ...  Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Keith Pfeffer			
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)		16C. DATE SIGNED 04/19/2018	

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-15-008/P00053	PAGE	OF
		2	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is obligated from estimated cost. Funds in the amount of (b)(4) are provided to cover the corresponding increment of fixed fee. The total cost plus fixed fee obligated is \$1,343,609.41. The amount allotted for costs is estimated to cover the contractors performance through 9/12/2018.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>LIST OF CHANGES:</p> <p>Reason for Modification: Funding Only Action</p> <p>Total Amount for this Modification: \$1,343,609.41</p> <p>Obligated Amount for this Modification: \$1,343,609.41</p> <p>CHANGES FOR LINE ITEM NUMBER: 4</p> <p>Obligated Amount for this Modification: \$1,343,609.41</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-264B000-000F72XPC-2532-26A6A-18264BE020-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 264B000 Program (PRC) 000F72XPC Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 18264BE020-001 Quantity: 0 Amount: \$80,540.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-264B000-000F72XPC-2532-26A6A-18264BE022-001 Beginning FiscalYear 18 Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00053	3	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 264B000 Program (PRC) 000F72XPC Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 18264BE022-001 Quantity: 0 Amount: \$350,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-264B000-000F72-2532-26A6A-18264BE022-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 264B000 Program (PRC) 000F72 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 18264BE022-002 Quantity: 0 Amount: \$165,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-261E000-000FK8XPV-2532-26A6F-18261EC805-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 261E000 Program (PRC) 000FK8XPV Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6F DCN-LineID 18261EC805-002 Quantity: 0 Amount: \$100,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK8XPV-2532-26A6A-1826UEE035-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00053	4	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Program (PRC) 000FK8XPV Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE035-002 Quantity: 0 Amount: \$180,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE035-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE035-001 Quantity: 0 Amount: \$80,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-B-53G6-000A59-2505-1853GP8014-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) B Budget Organization 53G6 Program (PRC) 000A59 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 1853GP8014-001 Quantity: 0 Amount: \$50,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR2-2532-26A5C-1826CFE023-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Continued ...				



<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00053	5	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Cost Organization 26A5C DCN-LineID 1826CFE023-001 Quantity: 0 Amount: \$60,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR2-2532-26A5C-1826CFE016-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826CFE016-001 Quantity: 0 Amount: \$75,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 17-18-C-26CF000-102FK6XR2-2532-26A6A-1826CFE016-003 3 Beginning FiscalYear 17 Ending Fiscal Year 18 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 102FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE016-003 Quantity: 0 Amount: \$16,297.41</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK8-2532-26A5C-1826CFE018-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK8 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826CFE018-001 Quantity: 0 Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00053	6	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Amount: \$100,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK8-2532-26A5C-1826CFE017-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK8 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826CFE017-001 Quantity: 0 Amount: \$25,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-B-53G2-000A59-2505-1853GP8012-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) B Budget Organization 53G2 Program (PRC) 000A59 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 1853GP8012-001 Quantity: 0 Amount: \$14,372.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-261E000-000FK8XPW-2532-26A6F-18261EC817-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 261E000 Program (PRC) 000FK8XPW Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6F DCN-LineID 18261EC817-001 Quantity: 0 Amount: \$7,400.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00053	7	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	18-19-C-261E000-000FK8XPV-2532-26A6A-18261EC804-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 261E000 Program (PRC) 000FK8XPV Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 18261EC804-002 Quantity: 0 Amount: \$14,100.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-261E000-000FK8XPW-2532-26A6A-18261EC804-003 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 261E000 Program (PRC) 000FK8XPW Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 18261EC804-003 Quantity: 0 Amount: \$14,300.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-261E000-000FK7XR3-2532-26A6A-18261EC804-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 261E000 Program (PRC) 000FK7XR3 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 18261EC804-001 Quantity: 0 Amount: \$11,600.00   Delivery: 03/31/2019 Continued ...				

NAME OF OFFEROR OR CONTRACTOR  
 JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Delivery Location Code: CPOD CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268 USA  Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711				



## Recapitulation of Funds

Contractor: JACOBS  
Contract No.: EP-C-15-008

## Recapitulation of Funding

### Option Period 3 - From 04/01/2018 to 03/31/2019

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Modification 0045	(b)(4)	(b)(4)	\$908,522.89
Modification 0046			\$0.00
Modification 0047			1,173,530.35
Modification 0048			-183,604.00
Modification 0052			100,000.00
<b>Modification P00053</b>			1,343,609.41
<b>Total Funded</b>			<b>\$3,342,058.65</b>
<b>Total Per Contract</b>			<b>\$7,402,005.00</b>
<b>Balance Unfunded</b>			<b>\$4,059,946.35</b>

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE		PAGE OF PAGES 1 7	
2. AMENDMENT/MODIFICATION NO. P00054		3. EFFECTIVE DATE See Block 16C		4. REQUISITION/PURCHASE REQ. NO.	
5. PROJECT NO. (If applicable)		6. ISSUED BY CODE CPOD		7. ADMINISTERED BY (If other than Item 6) CODE	
CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268					
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) JACOBS TECHNOLOGY INC. Attn: Jeff Foster 600 WILLIAM NORTHERN BLVD. P.O. BOX 884 TULLAHOMA TN 373880884		(x)		9A. AMENDMENT OF SOLICITATION NO.	
				9B. DATED (SEE ITEM 11)	
		x		10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-15-008	
				10B. DATED (SEE ITEM 13) 03/20/2015	
CODE 007923014		FACILITY CODE			

**11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS**

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended. ☐ is not extended.  
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

**13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.**

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) Bilateral - FAR 43.103(a)(3), Mutual Agreement of the Parties

**E. IMPORTANT:** Contractor ☐ is not. ☒ is required to sign this document and return 1 copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

DUNS Number: 007923014

Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina

Max Expire Date: 09/30/2019

LIST OF CHANGES:

Reason for Modification: Other Administrative Action

Total Amount for this Modification: \$0.00

Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Keith Pfeffer	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 05/15/2018

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00054	2	7

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>1) The purpose of this Modification is to revise and update "ATTACHMENT 3 - REPORTS OF WORK" to Contract EP-C-15-008. Specifically, the monthly reports due date as specified in ATTACHMENT 3, Section "(G)" is updated to "the 27th of each month", which replaces "the 20th of each month". See the attached revised ATTACHMENT 3, which hereby fully replaces all prior ATTACHMENT 3 versions.</p> <p>2) Except for this change, all other contract terms and conditions remain unchanged.</p> <p>Payment:</p> <p>RTP Finance Center US Environmental Protection Agency RTP-Finance Center Mail Drop D143-02 109 TW Alexander Drive Durham NC 27711</p>				

**ATTACHMENT 3**  
**EP-C-15-008**

**REPORTS OF WORK**

The contract work shall be divided into Work Assignments, each of which will require a Work Plan. Additionally, monthly progress reports and monthly financial management reports are required. Informal bi-weekly expenditure reports and special reports may be required for selected work assignments. Reports submitted under this contract shall reference the contract number, the work assignment number, and the Environmental Protection Agency (EPA) as the sponsoring agency.

**MONTHLY PROGRESS REPORT**

(A) The Contractor shall furnish electronic copies of the combined monthly technical and financial progress report stating the progress made, including the percentage of the project completed, and a description of the work accomplished to support the cost. If each work assignment is required to have an approved cost, the financial report for each month should clearly show how much approved funding and labor hours remain. If the work is ordered using work assignments or delivery orders, include the estimated percentage of task completed during the reporting period for each work assignment or delivery order.

(B) Specific discussions shall include difficulties encountered and remedial action taken during the reporting period, and anticipated activity with a schedule of deliverables for the subsequent reporting period. Quality assurance and equipment failures should be discussed.

(C) The Contractor shall provide a list of outstanding actions awaiting Contracting Officer authorization, noted with the corresponding work assignment number, such as subcontractor consents, overtime approvals, and work plan approvals.

(D) The progress report shall specify financial status at the contract level as follows:

(1) For the current reporting period, display the amount claimed.

(2) For the cumulative period and the cumulative contract life display: the amount obligated, amount originally invoiced, amount paid, amount suspended, amount disallowed, and remaining approved amount. The remaining approved amount is defined as the total obligated amount, less the total amount originally invoiced, plus total amount disallowed.

(3) Labor hours.

(i) A list of employees, their labor categories, and the numbers of hours worked for the reporting period.

(ii) For the current reporting period, display the expended direct labor hours (by EPA contract labor category) for the prime contractor and each subcontractor and consultant, and the total loaded direct labor costs.



(iii) For the cumulative contract period and the cumulative contract life display: the negotiated, expended, and remaining direct labor hours (by EPA labor category) for prime contractor, and each subcontractor and consultant, and the total loaded direct labor costs.

(iv) Display the estimated direct labor hours and costs to be expended during the next reporting period.

(4) Display the current dollar ceilings in the contract, net amount invoiced, and remaining amounts for the following categories: direct labor hours, total estimated cost, award fee pool (if applicable), subcontracts by individual subcontractor(s), travel, program management, and Other Direct Costs (ODCs).

(5) Unbilled allowable costs. Display the total costs incurred but unbilled for the current reporting period and cumulative for the contract.

(6) Average total cost per labor hour. For the current contract period, compare the actual total cost per hour to date with the average total cost per hour of the approved work plans.

(E) The report shall specify financial status at the work assignment or delivery order level as follows:

(1) For the current period, display the amount claimed.

(2) For the cumulative period display: amount shown on work plan, or latest work assignment/delivery order amendment amount (whichever is later); amount currently claimed; amount paid; amount suspended; amount disallowed; and remaining approved amount. The remaining approved amount is defined as: the work plan amount or latest work assignment or delivery order amount (whichever is later), less total amounts originally invoiced, plus total amount disallowed.

(3) Labor hours.

(i) A list of employees, their labor categories, and the number of hours worked for the reporting period.

(ii) For the current reporting period, display the expended direct labor hours (by EPA contract labor hour category) for prime contractor and each subcontractor and consultant and the total loaded direct labor costs.

(iii) For the cumulative reporting period and cumulative contract period, and the cumulative contract life display: the negotiated, expended and remaining direct labor hours (by EPA contract labor hour category) for prime contractor and each subcontractor and consultant and the total loaded direct labor costs.

(iv) Display the estimated direct labor hours and costs to be expended during the next reporting period.

(v) Display the estimates of remaining direct labor hours and costs required to complete the work assignment or delivery order.

(4) Unbilled allowable costs. Display the total costs incurred but unbilled for the current reporting period and cumulative for the work assignment.

(5) Average total cost per labor hour. For the current contract period, compare the actual total cost per hour to date with the average total cost per hour of the approved work plans.

(6) A list of deliverables for each work assignment or delivery order during the reporting period.

(7) The amount of funding as specified by the Government for the work assignment; the amount of funding remaining; and the percentage of funding remaining.

(F) This submission does not change the notification requirements of the "Limitation of Cost" or "Limitation of Funds" clauses requiring separate written notice to the Contracting Officer.

(G) The reports shall be submitted to the following addressees on or before the 27th of each month following the first complete reporting period of the contract. See EPAAR 1552.232-70, Submission of Invoices, paragraph (e), for details on the timing of submittals. Distribute reports as follows:

Number of electronic copies:

1 to Contracting Officer Representative

1 to Contracting Officer

### **Final Report for Each Work Assignment**

The specific final report requirements will be included in each work assignment and, unless stated otherwise in the work assignment, the format cited below will be used.

The Contractor shall revise all final drafts, both scientifically and technically, by incorporating changes, as well as correcting any technical errors uncovered in the Contractor's technical editing of the corrected report.

The Contractor shall then deliver a clean, typewritten, reproducible master copy of the revised report/document along with three copies (or whatever number is requested in the work assignment), to the appropriate EPA Work Assignment Contracting Officer Representative (WACOR). A single copy should also be sent separately to the EPA Contract Level Contracting Officer Representative (CLCOR). This shall be accompanied by duplicate in Microsoft Word 2007 on 3 ½" diskettes, CD-ROM, or by verified email transmission containing the final, clean version of the report/document.

All figures, photographs and other graphic display items shall be delivered in reproducible, camera-ready copy according to the guidelines set forth in the Handbook for Preparing ORD Reports (EPA 600/9-83-006, October 1989) and the NCEA Instruction Manual for Contractors (October 1991). To obtain a copy of the Handbook for Preparing ORD Reports, contact the ORD Publications, Cincinnati, Ohio 45268

At the time of peer review, copies or reprints of all identified literature (including both articles referenced and relevant articles considered but not referenced) shall be delivered to the EPA WACOR along with two copies of the draft of the report. Two copies of each referenced article must arrive in standard size, brown file folders with typed labels indicating the first author's name, the year published and the first significant words of the title. A listing of all literature data bases surveyed (with years searched) along with copies of the search shall be provided to the EPA WACOR at the time of submission of the first draft of any report/document/project.

### **Confidential Business Information Reports**

As directed in work assignments, the contractor shall prepare the following number of Confidential Business Information (CBI) reports:

<u>No. of Copies</u>	<u>Addressee</u>
2	Contract Level COR
1	Work Assignment COR

The Environmental Protection Agency shall authorize the contractor to access information which has been submitted to the EPA under various sections of the National Environmental Policy Act (NEPA), the Clean Air Act (CAA), the Clean Water Act (CWA), the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), and the Toxic Substances Control Act (TSCA). Some of the information may be determined to be CBI. Relevant information needed from the FIFRA and TSCA files are: Environmental fate and transport processes, site-specifics measurements, pharmacokinetics, other reproductive effects, aquatic toxicity, existing guidelines and standards, risk assessment, and reportable quantities. The additional information collected from the CBI files serves to complete the literature search of a selected compound.

CBI reports are required when there is existing information in the CBI file on a selected compound. The individual work assignments shall indicate when CBI reports are required, and when they are due. New chemical substance, such as those not listed on the TSCA inventory of chemical substances, are evaluated by the EPA under Section 5 of TSCA. Existing chemical substances, such as those listed on the TSCA inventory, are evaluated by the Agency under Sections 4, 6, 7, and 9 of TSCA.

See EPAAR clause 1552.235-71 "Treatment of Confidential Business Information", EPAAR clause 1552.235-70 "Screening Business Information for Claims of Confidentiality, and EPAAR 1552.235-77 Data Security For Federal Insecticide, Fungicide And Rodenticide Act Confidential Business Information. (DEC 1997)

### **Submission of Workplans**

The Contractor shall submit for each work assignment, a workplan for completing the work assignment on time and within budget. This workplan will be reviewed by the CLCOR and the WACOR, and approved by the Contracting Officer prior to the approval of the work assignment.

### **QUALITY ASSURANCE PROJECT PLANS (QAPPs)**

Each technical work assignment requires an EPA approved Quality Assurance Project Plan (QAPP). The requirements for the QAPP will be identified in the SOW for each WA. The QAPP shall be submitted by the awardee to the EPA WACOR in accordance with a schedule set by the WACOR, but before a measurement, data gathering, or data generation activity begins. The QAPP shall be submitted as a separate document or as part of the work plan.

The awardee shall submit an electronic copy of the QAPP to the WACOR. This copy shall be accompanied by a QAPP Approval Form with the appropriate signatures. The awardee should also provide any supporting documentation, such as work plans, standard operating procedures, etc.

No measurement, data gathering, or data generation activity may be started without an EPA approved QAPP.

## **QUALITY ASSURANCE (QA) REPORTING**

Each interim or final report produced by a measurement, data gathering, or data generation activity shall include, as an integral section of the Project Report or as an Appendix, a readily identifiable discussion of the data quality of research results. The report shall include the following items, at a minimum.

- Discussion of the quality of data produced in terms of precision, bias, completeness, representativeness, and comparability, or semi-quantitative assessments of data quality, as applicable.
- Changes to the QA project plan, if any.
- Limitations or constraints on the use or applicability of the data, if any.
- Results of systems or performance audits.
- Identification of any significant QA/QC problems encountered.
- Resolution (i.e., corrective actions) of significant QA/QC problems.

## **OTHER REPORTING REQUIREMENTS**

Individual work assignments may specify additional reporting requirements not addressed above. The Contractor may be required to prepare written narratives, slides or photographs, and charts, graphs, drawings or other graphics to permit clear presentation of the progress of any ongoing work assignments. The Contractor shall ensure that such deliverables are of high quality and that all reported work is supported by documentation and references to enable work to withstand scientific critique. Assumptions made by the Contractor shall be identified and clearly explained as to validity and limitations. Calculations must be supported by sufficient data and explanation to permit cross-checking, and investigative procedures must be clearly presented.

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 26	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00055		See Block 16C		See Schedule			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CPOD							
US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
JACOBS TECHNOLOGY INC. Attn: Jeff Foster 600 WILLIAM NORTHERN BLVD. P.O. BOX 884 TULLAHOMA TN 373880884							
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				x 10A. MODIFICATION OF CONTRACT/ORDER NO. EP-C-15-008			
				10B. DATED (SEE ITEM 13)			
CODE 007923014		FACILITY CODE		03/20/2015			
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$239,000.00	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) Bilateral - FAR 43.103(a)(3), Mutual Agreement of the Parties; Unilateral - Limitation of Funds						
<b>E. IMPORTANT:</b> Contractor <input type="checkbox"/> is not. <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007923014							
Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina							
Max Expire Date: 09/30/2019							
1) The purpose of this Modification is to provide incremental funding for Option Period 3. See attached Recapitulation of Funds sheet for details, as well as the below.							
2) Additionally, this Modification provides an update to the Base Contract (EP-C-15-008) Performance Work Statement (PWS). All updates are highlighted in red text in the attached updated PWS document.							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Keith Pfeffer			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		06/12/2018	
NSN 7540-01-152-8070				STANDARD FORM 30 (REV. 10-83)			
Previous edition unusable				Prescribed by GSA			
				FAR (48 CFR) 53.243			

## CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
EP-C-15-008/P00055PAGE OF  
2 26NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>3) Except for these changes, all other contract terms and conditions remain unchanged.</p> <p>OPTION PERIOD 3</p> <p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is obligated from estimated cost. Funds in the amount of (b)(4) are provided to cover the corresponding increment of fixed fee. The total cost plus fixed fee obligated is \$239,000.00. The amount allotted for costs is estimated to cover the contractors performance through 9/24/2018.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>LIST OF CHANGES:</p> <p>Total Amount for this Modification: \$239,000.00</p> <p>Obligated Amount for this Modification: \$239,000.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 4</p> <p>Obligated Amount for this Modification: \$239,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 17-E1D-53GS-102A04-4183-1853PM8062-001 Beginning FiscalYear 17 Ending Fiscal Year Fund (Appropriation) E1D Budget Organization 53GS Program (PRC) 102A04 Budget (BOC) 4183 Job # (Site/Project) Cost Organization DCN-LineID 1853PM8062-001 Quantity: 0 Amount: \$71,300.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-E1-53GS-000A04XPM-4183-1853PM8062-002 Beginning FiscalYear 18 Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00055	3	26

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Ending Fiscal Year</p> <p>Fund (Appropriation) E1</p> <p>Budget Organization 53GS</p> <p>Program (PRC) 000A04XPM</p> <p>Budget (BOC) 4183</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 1853PM8062-002</p> <p>Quantity: 0</p> <p>Amount: \$47,700.00</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code:</p> <p>17-18-C-26UE000-102FK6XR2-2532-26A6A-1826UEE044-001</p> <p>Beginning FiscalYear 17</p> <p>Ending Fiscal Year 18</p> <p>Fund (Appropriation) C</p> <p>Budget Organization 26UE000</p> <p>Program (PRC) 102FK6XR2</p> <p>Budget (BOC) 2532</p> <p>Job # (Site/Project)</p> <p>Cost Organization 26A6A</p> <p>DCN-LineID 1826UEE044-001</p> <p>Quantity: 0</p> <p>Amount: \$70,000.00</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code:</p> <p>17-E1D-53GS-102A04-4183-1853PM8067-001</p> <p>Beginning FiscalYear 17</p> <p>Ending Fiscal Year</p> <p>Fund (Appropriation) E1D</p> <p>Budget Organization 53GS</p> <p>Program (PRC) 102A04</p> <p>Budget (BOC) 4183</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 1853PM8067-001</p> <p>Quantity: 0</p> <p>Amount: \$14,669.70</p> <p>NEW ACCOUNTING CODE ADDED:</p> <p>Account code:</p> <p>18-E1-53GS-000A04-4183-1853PM8067-002</p> <p>Beginning FiscalYear 18</p> <p>Ending Fiscal Year</p> <p>Fund (Appropriation) E1</p> <p>Budget Organization 53GS</p> <p>Program (PRC) 000A04</p> <p>Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-15-008/P00055	PAGE	OF
		4	26

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Budget (BOC) 4183 Job # (Site/Project) Cost Organization DCN-LineID 1853PM8067-002 Quantity: 0 Amount: \$35,330.30  Delivery: 03/31/2019 Delivery Location Code: CPOD CPOD US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268 USA  Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711				



# **PERFORMANCE WORK STATEMENT**

## **Research Laboratory Support for the EPA Office of Research and Development at Research Triangle Park (RTP), North Carolina**

This contract is for the primary use of the U.S. Environmental Protection Agency (EPA) Office of Research and Development (ORD) Air Pollution Prevention and Control Division (APPCD) of the National Risk Management Research Laboratory (NRMRL), the Decontamination and Consequence Management Division (DCMD) of the National Homeland Security Research Center (NHSRC), the Human Exposure and Atmospheric Sciences Division (HEASD) of the National Exposure Research Laboratory (NERL), and the Atmospheric Modeling and Analysis Division (AMAD) of NERL. The contract may also be used by other organizations in the EPA Office of Research and Development Research Facility at Research Triangle Park (RTP), North Carolina, subject to the work being within the capacity limits of the scope of work of the contract. Certain services, such as the consolidated electronic and machine shops maybe required to fabricate unique pieces of equipment that augment or adapt instrumentation for different uses or for various conditions , while the specialized analytical laboratories may develop or modify standard protocols as required to identify chemical compounds retrieve from air or diesel emissions, all conducted under existing APPCD administered work assignments (WAs) with funding provided by the requesting program or organization.

APPCD's mission is to conduct research that will assist the EPA's research, regulatory, and enforcement organizations in developing and enforcing regulations. APPCD fulfills this mission by providing results of research studies in the areas of air pollution prevention and control. APPCD stays in close communication with the regulatory and enforcement organizations in order to ensure that its research focuses on pollution problems of current concern.

DCMD's mission is to conduct decontamination and consequence management research with an emphasis on rapid and cost-effective cleanup and restoration of buildings and broad outdoor areas to support EPA's mission to respond to all-hazards contamination events. DCMD researchers seek to identify and develop optimal technologies and procedures for effective and efficient decontamination, disposal, and related activities (e.g., evaluation of sampling and analytical techniques for measurement of chemical, biological, and radiological agents; assessing fate and transport of such agents) while maximizing protection of decontamination crews, the general public, and the environment. They also investigate the dispersion and exposure potential of Chemical, Biological and Radiation (CBR) releases in indoor and ambient environments. DCMD works with EPA's program offices to develop and deliver reliable, responsive expertise and products based on scientific research.

HEASD conducts research in the general areas of atmospheric sciences and human exposure. Research is conducted to characterize exposures to chemicals across the whole exposure assessment paradigm, from source to the exposed person or receptor. Work is performed in the areas of source identification and characterization; transport, transformation, and fate of pollutants; atmospheric chemistry and physics; source apportionment; exposure measurements; biomonitoring; exposure and dose modeling; and methods development.

AMAD is responsible for the development, evaluation, and application of air quality simulation

modeling. This research includes the conduct of fluid modeling studies in the Meteorological Wind Tunnel that are translated into numerical algorithms used by the Agency in support of the Clean Air Act.

## **1.0 General Requirements**

The contractor shall perform specific technical WAs within the general areas described in this Performance Work Statement (PWS). Such technical WAs shall be in support of the Office of Research & Development (ORD). The support to be provided includes facility scheduling, daily on-site and off-site operations, research activities, and modification and maintenance of facilities.

### **1.1 Project Management**

The contractor shall effectively manage, interface, coordinate, and perform all tasks assigned in the WAs. The contractor shall ensure that work proceeds efficiently, the WA Contracting Officer's Representatives (WACORs) and the Contract Level Contracting Officer's Representative (CL-COR) are kept informed of progress, and that short project lead times (which may require less than one day) are met. The contractor shall maintain files and records as described within the contract attachment entitled "Reports of Work," and as specified in each WA.

### **1.2 Quality Assurance and Quality Control Activities for Laboratory Operations**

The contractor shall perform quality assurance (QA) activities consistent with EPA Order CIO 2105.0 and ANSI/ASQ E4 (as per 48CFR 46). Specific guidance on EPA quality systems can be found in EPA/240/R-02/003 (<http://epa.gov/quality/qs-docs/overview-final.pdf>) and task specific guidance shall be followed when provided by the CLCOR following consultation with the WACOR, or Contracting Officer, (CO) and/or the Quality Assurance Officer. The contractor shall ensure that no measurement activity is started prior to approval of the project or task-specific quality assurance project plan (QAPP) by the EPA QA Manager or a delegate thereof. QA and quality control (QC) activities shall include development of QAPPs and QA reporting for each measurement and/or data gathering project and/or task.

Within 60 days of the contract award, the contractor shall review any existing QAPPs covering measurement or data gathering projects that will be conducted during the first year of the contract and shall recommend in writing to the CL-COR or WACOR any proposed modifications to the plans. Modified QAPPs shall be subject to the same approval process required for new QAPPs, including review by the contractor's QA staff. Identification of QA/QC requirements and the assigned QA category shall be indicated on specific WAs. The contractor's QA staff shall review and document the review of all QAPPs, SOPs, and Deliverables before they are submitted for EPA QA Manager Approval. Deliverable should also include documentation from the Contractor's QA staff, indicating that the Deliverable has met the requirements specified in the approved QAPP. All contractor employees working on the collection and/or use of environmental data; the design, construction, and operation of environmental technologies; or the development of software, models, or methods under this contract shall receive documented QA training before starting work on a project involving the aforementioned activities. The QA training topics shall include: The EPA Quality System, the graded approach to QA, and writing QAPPs.

The contractor shall comply with its previously approved Quality Management Plan (QMP) submitted prior to contract award.

In conjunction with performance of the technical requirements of this contract, the contractor shall provide QA support in the following technical support areas:

- (a) Document and Data Reviews – Reviews of other companies' QAPPs, QMPs, standard operating

procedures (SOPs) for laboratories, test plans, data, final reports, and journal papers. Periodically, confidential business information (CBI) may be included in the test plans, data, or final reports that are to be reviewed. The contractor shall comply with the requirements of the CBI clauses of the contract.

(b) Audits or Assessments of Technical Activities – Assessments of other companies' environmental sample collection and measurement, environmental technology demonstrations, and analytical laboratory activities.

(c) Technical Quality System Development and Support – Preparation of facility manuals, laboratory standard operating procedures, QA Plans; review of sampling and analytical methods; preparation and evaluation of audit materials; and analysis of multimedia samples for assessment of methods, procedures, and comparability.

(d) Quality Studies – Provide training in quality assurance as specified in individual WAs. and conduct special studies on QA/QC procedures for measurement activities.

### 1.3 Occupational Safety, Health, and Environmental Management

The contractor shall maintain and manage an employee occupational safety, health, and environmental management (SHEM) program to meet EPA's requirements for on-site work performed at EPA administered facilities, and when performing fieldwork. The contractor's SHEM program shall meet all Federal, State, and local regulations. The contractor's SHEM program shall include personnel training, environmental compliance emphasizing adherence to operating permits and licenses, and occupational safety and health management for all administrative and research tasks performed under the terms of the contract.

A job hazard analysis (JHA) must be performed for each employee to determine potential or actual workplace exposures to chemical, radiological or biological agents, and/or physical stressors. Some employees may need to be enrolled in occupational medical surveillance programs for monitoring an activity or exposure currently regulated by the Occupational Safety and Health Administration (OSHA). For example, all personnel wearing respiratory protection are required to have medical clearance to wear the prescribed respirator. The contractor may elect to follow **EPA Order 1460.1 Occupational Medical Surveillance Program** (Approval Date 04/20/2010) to determine participation in an Occupational Medical Surveillance program, or the contractor can administer its own enrollment criteria in accordance with the contractor's standard operating procedures or policies.

### 1.4 Trouble Calls

The contractor shall respond to ad hoc trouble calls on the facilities and Government-furnished property (GFP) or equipment it operates and maintains.

**\*\*\* Each approved WA will contain the procedures for the contractor to follow concerning Trouble Calls. If the problem is not life threatening, or causing property or equipment loss, the contractor shall stop work on the approved WA until such time that an emergency approval from the WACOR, CL-COR, and CO can be obtained. Once informal approval is obtained, the contractor may resume work and or start the repair for a period of 30 days without a formal amendment in place.**

### 1.5 Presentations at Technical Conferences, Seminars, or Symposia

The contractor may be required to make presentations at technical conferences, seminars, or symposia on the results of research the contractor has conducted. The contractor shall require its representatives to wear identifying badges to ensure they are recognized as contractor employees. Furthermore, the contractor shall verbally identify itself as a contractor during speeches and interactions with other meeting attendees. The contractor shall refer all questions regarding EPA policy and procedures to the WACOR. The contractor shall not respond to EPA policy and procedure questions. Travel in conjunction with providing such presentations shall be in accordance with the clause in Section H entitled "Approval of Contractor Travel".

#### 1.6 Collaboration with Colleges, Universities, and Other Outside Groups

Because the contract effort is an integral part of ORD's overall research program, the contractor may be required to collaborate with colleges, universities, federal, state, local governments, or other outside groups. Collaboration means working with other groups, but not taking direction from them or giving them direction. Collaboration will usually be in the form of providing data from various experiments or information on how experiments are conducted or data are gathered and reduced. The scope for such collaboration shall be contained in specific WAs.

Collaboration may require that the contractor travel to off-site locations, typically in the Research Triangle Park (RTP) commuting area, but on occasion to remote sites. Such travel shall be in accordance with the clause in Section H entitled "Approval of Contractor Travel".

#### 1.7 Computer Services in Support of ORD's Research Requirements

The contractor shall provide information technology (IT) technical services only as required by and incidental to the engineering and analytical tasks specified in the contract. These limited contractor IT tasks may include the development of computer programs for engineering data analysis, modification of existing scientific and technical software, and interfacing of new hardware for computers used by the contractor. For each activity, the contractor shall provide appropriate QA/QC procedures and documentation to ensure successful operation of the system.

The contractor shall provide IT technical services to ORD limited to the following: operation, analysis and debugging of software written to interface with research equipment; analysis and troubleshooting of problems with research hardware; use of IT models to enable the evaluation of emissions sources or decontamination processes; development, programming, and application of air quality chemistry models, source apportionment models, exposure and dose models, and related models and decision support tools used for exposure and risk assessment; and the preparation of documentation on software or hardware to further APPCD, DCMD, AMAD and HEASD research goals. The contractor shall provide support for the design, fabrication, and modification of computer interfaces between monitors and/or devices.

The software and hardware must be compatible with Agency-specified computer systems and networks. The contractor shall perform tasks under this contract in accordance with the policies, standards, and procedures set forth in Section C of the contract, EPAAR 1552.211-79, "Compliance with EPA Policies for Information Resources Management".

No computer equipment shall be connected to an EPA network without prior approval of the ORD Office of Science Information Management (OSIM).

#### 1.8 Report Preparation

The contractor shall provide report preparation services necessary to support the research being conducted. This work shall include technical editing and report production tasks, like formatting, preparation of graphics, and publishing, sufficient to meet current EPA requirements such as those specified in the “Visual and Product Standards Graphics Manual” (EPA Report No. EPA 600/R-07/054) dated July 2007. The contractor shall also provide technical assistance to EPA investigators in the preparation of journal articles, briefings, and other communications on an as-required basis.

**\*\*\* Each Work Assignment shall have a sections detailing the type of report and specificity required for the work requested. See Attachment “Reports of Work”.**

## **2.0 Laboratory Research**

**\*\*\* No work shall start unless there is an authorized work assignment in place.**

The contractor shall evaluate the feasibility of potential control technologies and/or develop data on the fundamental parameters affecting the design and operation of pollution control and/or prevention devices, and/or develop data to characterize stationary sources (indoor and outdoor) or mobile sources of air pollution.

The contractor shall conduct laboratory studies to investigate technologies to be used for the decontamination, disposal, and/or sampling and analyses of materials that are contaminated with surrogates of biological, chemical, radiological, or foreign animal disease agents. In support of this evaluation, the contractor shall design, assemble, operate, maintain, repair, and modify laboratory, bench, and pilot-scale experimental units.

Based on the laboratory research described above, the contractor shall:

A. Design experiments to evaluate the feasibility of using new processes and chemicals; acquire fundamental data on existing processes and chemicals; and/or provide fundamental information on pollution sources, environmental concentrations, and human or ecosystem exposure to chemicals or agents. The general outline and goals of the experiments will be defined in individual WAs.

B. Conduct applied methods development and research for the measurement of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), inorganic and metal-containing compounds, and National Ambient Air Quality Standards (NAAQS) criteria pollutants for multi-media, multi-pathway human exposure research in support of exposure measurements studies.

C. Conduct research to develop, describe, and demonstrate new methods for determining the bioavailability of xenobiotic materials, and for measurement of biomarkers in biological media (e.g., blood, urine, saliva, breath).

D. Design, conduct, or support experiments to investigate the roles of atmospheric chemistry and physics in producing, transforming, and transporting pollutants and hazardous materials generated from pollutants in outdoor and indoor air. Experiments shall be conducted in a designated EPA environmental (smog) chamber or other designated analytical vessel that may be maintained and operated by the contractor. Perform sample collection and analyses during the experiments.

E. Operate equipment, observe significant events that affect results, and suggest modifications to experimental designs and/or equipment configurations.

F. Maintain and repair experimental equipment and ancillary devices. Make alterations as specified in WAs to improve equipment operation or investigate additional parameters that may affect the evaluation of the process.

G. Evaluate data acquired and prepare reports documenting the operation of the test equipment, the results obtained, and the quality of the results. The reports shall include any tables, charts, graphs, drawings, or appendices necessary to fully explain the experiments performed, shall clearly document the results, and shall identify and support the quality of data included.

H. Provide necessary training for contractor personnel working in ORD laboratories and pilot plants.

I. Conduct experiments related to the evaluation of sampling (surface and air) and analytical techniques for the measurement of chemical, biological, and radiological agents; and experiments related to the fate and transport of such agents.

J. Conduct experiments related to the evaluation of engineering aspects of decontamination and disposal methods, such as assessing impacts on materials from the use decontaminants, and techniques to properly contain decontaminants

### **3.0 Facility Operation**

**\*\*\* No work shall start unless there is an authorized work assignment in place.**

The contractor shall design, assemble, operate, maintain, repair, and modify ORD pilot plants, test facilities, and full-scale equipment at RTP in support of ORD's programs to characterize source emissions, the fate and transport of airborne emissions, and to develop and evaluate control and pollution prevention technologies. The contractor shall maintain, repair, and operate instrumentation and sampling equipment, as detailed in paragraphs 3.A through 3.G of this Section. The contractor shall operate and maintain the Treatability Area Air Pollution Control System. Examples of major experimental facilities the contractor shall operate and maintain are as follows:

#### Pilot-Scale Systems

- Multi-Pollutant Combustion Research Facility
- Transportable Animal Carcass Gasifier
- Open Burning Test Facility
- Consequence Management and Decontamination Evaluation Room (COMMANDER)  
Large Indoor Air Chamber
- Dual Chamber Indoor Air Test Chamber
- Rotary Kiln Incinerator Simulator
- Package Boiler Simulator
- Scotch Marine Boiler
- Refractory Lined Tunnel Furnace
- Innovation Furnace Reactor (IFR)
- Flue Gas Cleaning System
- Light-Duty Dynamometer Testing Facility
- Heavy-Duty Dynamometer Testing Facility
- Diesel Emissions Aerosol Laboratory
- Atmospheric Chemistry Test Chambers and Associated Support Laboratories
- Bioavailability Research Laboratory
- Meteorological Wind Tunnel
- Scanning Electron Microscopy Laboratory

- VOC and SVOC Laboratories
- X-Ray Fluorescence, HR-ICP-MS, and Associated Facilities
- Biomarker Laboratory
- Bench Scale Experimental Systems
- Wind Tunnel

#### Bench Scale Experimental Systems

- Entrained Flow Reactor
- Various Furnaces

#### Laboratories

- Microbiology Support Laboratory
- Metrology Laboratory
- Inorganic Analysis Laboratory
- Decontamination Technology Research Laboratories
- Fine Particulate Matter Laboratory
- Animal Inhalation Laboratory
- Aerosol Test Facility

The Contractor shall:

A. Operate, maintain, repair, and modify APPCD's, DCMD's, HEASD's, and AMAD's bench, pilot, and full-scale installations; mobile laboratory test equipment; wind tunnels and chambers; and heavy duty truck in a manner that ensures the collection of timely, accurate, and reliable data. This task also includes the Heavy and Light Duty Dynamometer Facilities, as well as the Transportable Animal Carcass Gasifier. This task may also include HEASD's Atmospheric Chemistry test chambers and support laboratory facilities, and/or the AMAD's meteorological wind tunnel facility.

B. Operate APPCD's, DCMD's, HEASD's, and AMAD's bench-, pilot-, and full-scale installations on specified schedules up to and including continuous operation exclusive of maintenance, repair, start-up and shutdown times. The majority of operations will be on an 8-hour per day schedule. Approximately 5% of the hours planned for this area will be required for continuous 24-hour operation.

C. Ensure adherence to specified run conditions and maintenance of proper controls and tolerances with respect to feed rates, recirculation rates, bleed rates, flue gas flow and composition, temperatures, pressures, and other parameters as specified in work assignments.

D. Maintain and repair pumps, fans, controllers, and other associated equipment, as needed.

E. Develop test plans to meet research objectives, review execution of such plans, evaluate data, and report results.

F. Modify bench, pilot, and full-scale installation configurations and install test equipment as required by research objectives.

G. Provide emergency alarm call support on any ORD facility for which it is responsible.

#### **4.0 Process Sampling and Monitoring**

**\*\*\* No work shall start unless there is an authorized work assignment in place.**



The contractor shall perform technical sampling and process monitoring services. The contractor shall acquire samples from laboratory, pilot, and full-scale processes at APPCD's, DCMD's, HEASD's, and AMAD's on-site and off-site facilities. Monitoring shall include the use of manual sampling equipment, instrumented mobile vehicles, and aerosol measurement instrumentation. The contractor shall prepare sampling trains and sampling substrates, including fiberglass, Teflon-coated fiberglass, XAD-2, Tenax, and carbon filters. The contractor shall install and use process monitoring equipment to evaluate processes.

The contractor shall acquire samples of process feed materials, internal process streams, process discharges, and fugitive sources. Samples may be solids, liquids, or gases. Samples shall be collected, handled, and stored using procedures that ensure minimum deterioration prior to analysis. For situations in which adequate procedures and/or equipment do not exist, the contractor shall modify procedures and/or sampling equipment as required.

## **5.0 Analytical Chemistry and Microbiology**

**\*\*\* No work shall start unless there is an authorized work assignment in place.**

The contractor shall prepare and analyze standards, routine samples, and special samples. Unique samples requiring special preparation techniques and/or analytical procedures will be included. For example, the contractor shall operate and maintain the dioxin, organics, and/or N20 laboratories. In addition, the contractor shall maintain the receptor modeling source signature laboratory (E-wing, 5<sup>th</sup> floor), the mobile source support laboratory (E-wing, 2<sup>nd</sup> floor), and a weighing room in the High Bay. If directed via WA, the contractor shall operate and maintain laboratories in HEASD, to include laboratories supporting analysis of multi-media samples (e.g., air, soil, water, dust, food) and biological samples (e.g., blood, urine, saliva, breath) for a wide range of classes of chemicals, including VOCs, SVOCs, inorganics, Criteria pollutants, and nanomaterials. The contractor shall make modifications to procedures when necessary and undertake the development of methods of specific compounds. The contractor shall maintain an accurate record of samples received and analyzed, including the cost of each analysis.

### **5.1 Sample Preparation**

The contractor shall provide sample preparation using solvent extraction, dilution, filtration, concentration, digestion, solvent exchange, solvent partitioning, sonication, or supercritical fluid extraction.

### **5.2. Inorganic Analysis**

The contractor shall provide trace element and anion analysis capabilities. See attachment GFP list for Government Property available for elemental analyses, including, but not limited to, mercury (Hg), sulfate ( $\text{SO}_4^{2-}$ ), nitrate ( $\text{NO}_3^{-1}$ ), chloride ( $\text{Cl}^{-1}$ ), and fluoride ( $\text{F}^{-1}$ ). The contractor shall also provide x-ray fluorescence analysis.

### **5.3 Organic Analysis**

The contractor shall analyze organic materials in process and discharge samples, multi-media samples, biological samples, and ultra-dilute chemical warfare agents. Samples to be analyzed include the full range of compound classes, including, but not limited to, aromatic and aliphatic hydrocarbons, nitrogen- and sulfur-containing organics, halogenated organics, and dioxins. The contractor shall follow analytical procedures, including general screening protocols and compound-specific determinations.



## 5.4 Physical Analysis

The contractor shall provide technical support for the physical characterization of solids, liquids, and gases, and the characterization of sorbents for vapor and liquid density, viscosity, thermal conductivity, vapor pressure versus temperature, boiling point elevation, flammability, minimum ignition energy, miscibility, materials compatibility, tensile properties, fluid dynamic properties, particle size and distribution, flammability limits, flash points, ignition energies, corrosion, heat of vaporization, diffusivity, packing density, packing void fraction, hardness, particle size distribution, pore size distribution, BET surface area, x-ray diffraction (XRD) peak profile analysis, x-ray fluorescence, scanning electron microscopy, laser ablation techniques, solid material bulk density, isotherms and hydraulic conductivity of porous material, and pore volume.

## 5.5 Microbiological Analysis

The contractor shall provide microbiological support to DCMD and APPCD. Such support includes, but is not limited to, growth and maintenance of biological cultures and stocks; preparation of media and reagents used in microbiological analyses; organization, inventory, and upkeep of laboratory notebooks, glassware, equipment, and supplies; preparation of spore suspensions of various surrogate biological agents; sterilization of test materials and instruments; inoculation of coupons and materials used in decontamination studies; creation of new and the update of existing operating procedures used in decontamination and other research; and numerous laboratory analyses used to quantitate microbiological organisms in decontamination, disposal, sampling, fate, containment, and other related studies.

## 6.0 Instrumentation and Electronics

**\*\*\* No work shall start unless there is an authorized work assignment in place.**

A. The contractor shall provide support for the development, modification, fabrication, calibration, repair, design, and maintenance of APPCD, DCMD, AMAD and HEASD instrumentation and electronics, as described below: Electronics Equipment – Calibration of electron instrumentation and machine shop equipment in support of laboratory, bench, pilot, sampling and analytical projects.

B. Process Instrumentation – Provide technical support for process instrumentation, including maintenance, calibration, repair, modification, fabrication, and design of instruments and equipment; fabrication of computer interfaces between monitoring equipment, gas generation equipment, and computer equipment; and on-line process monitoring and/or control.

C. Laboratory Instruments and Computer Interfaces – The contractor shall evaluate repairs and/or modifications needed and recommend the most effective means of implementation, i.e., on-site versus return to manufacturer.

D. Sampling Equipment - The contractor shall maintain all sampling apparatus and instrumentation for use in-house and in field locations.

E. Design and Fabrication of Instruments – Machine and Fabrication Shop services: working from engineering drawings and sketches, the contractor shall provide support to fabricate prototype devices to support ongoing projects. Upon request, these services shall also be available to other ORD users in RTP.

## 7.0 Off-Site Research

**\*\*\* No work shall start unless there is an authorized work assignment in place.**

The Contractor shall provide off-site technical support, including, but not limited to, the following: development of diesel emission factors; development of emission factors for automobiles; studies of emission sources and particulate matter emitted from vehicles, generator sets, and aircrafts; development of field tests for optical equipment; characterization of indoor air sources and remediation approaches; residential wood combustion studies; ventilation and air cleaning research; decontamination and disposal research, including research and demonstration of techniques for the decontamination and disposal of materials contaminated with surrogates of chemical, biological, radiological, and foreign animal disease (FAD) agents; studies of the relationship between indoor and outdoor fine particles; studies of Fourier-Transform Infrared Spectroscopy (FTIR) and other remote sensing techniques for the determination of area source emissions; studies of emissions and outdoor burning operations; studies of emerging air pollutant measurement methods; evaluations of biomass fuel combustion and the open burning of biomass; studies of process and fugitive gas emissions; studies of emission sources using laser-based technology; studies of technologies developed for reduction of emission of global-warming greenhouse gases; studies of plant/soil trace gases; studies of environmentally acceptable disposal of contaminated plant and animal matter; field studies and model development to understand the role of atmospheric chemistry on pollutant transformation in the atmosphere; source apportionment of chemicals in air and other media; studies of the occurrence, fate, and transport of emerging chemicals in environmental media; studies of human exposure to chemicals for different lifestyles; observational human exposure studies requiring human subjects research approval; collection and analyses of human activity data for use in predictive exposure models; use and interpretation of biomarkers of exposure and effect; development and application of exposure and dose models and decision support tools for predicting human exposure and risk; technical and administrative support for the Federal Reference and Equivalent Methods program to meet provisions of the Clean Air Act; database support; statistical analysis and modeling support; and laboratory studies and data analysis support in the meteorological wind tunnel at EPA's Page Road facility.

### Technical Support to Pilot Scale and Field Studies

Researchers in NERL conduct field studies to support methods development and validation, as well as to describe environmental conditions and human exposures in its atmospheric sciences and human exposure research programs. These field studies may be located remotely from the EPA RTP campus. Although the studies are often small studies of short duration, larger studies may be required over extended time periods. Other studies may be of a larger scale, including population-based studies or studies conducted over wide geographic areas and extended time periods. Work to support field studies may include the following:

- 1 Conduct field evaluations of various types of pollutant collection, measuring, and/or monitoring instruments and methods. This may include operating and maintaining a field evaluation facility for this purpose. Most such field evaluations are expected to be in the local RTP area; however, field evaluations at non-local locations may be required on occasion.
- 2 Develop and execute research plans to characterize and monitor or collect physical, environmental, human exposure, and biomonitoring samples or parameters in the field studies. Pollutants and physical parameters may include, but are not limited to: criteria pollutants; particulate

matter; inorganic species, including metals; organic species, including PAHs, pesticides, phthalates, brominated flame retardants, and VOCs; degradation products or metabolites; routine meteorological parameters (temperature, relative humidity, wind speed, wind direction, solar radiation, precipitation); research meteorological parameters (vector average wind speed, instantaneous vector and scalar, turbulence, and delta temperature); building ventilation parameters, including, but not limited to, air exchange rates, description and measurement of heating, air conditioning and ventilation systems; parameters describing landscape and ecological conditions (surface wetness, vegetation condition, leaf area index (LAI)); and site specific factors (ground conditions, amount of leaf coverage, etc.); porosity, % water; % solids; and redox potential.

3 Conduct and support regional human, animal, and/or environmental exposure studies, possibly including large or population-based exposure studies. The contractor shall conduct multimedia, multi-pathway, human, animal, and environmental exposure studies focused on developing, evaluating, and validating measurement protocols and methods; identifying important routes and pathways of exposure; and determining causal relationships relating sources to exposure. Human exposure studies may deal with any and all exposure pathways, including inhalation, ingestion, and absorption. Because these studies may be concerned with total human exposure, the investigations may consider exposures at work, at home, during recreational activities, in transit, and during other potentially significant exposure scenarios. The contractor shall prepare questionnaires, (e.g.) human activity pattern data collection, environmental exposure factors), and field sampling instruments for the study, and assistance in EPA obtaining Information Collection Request (ICR) approvals as required to reduce duplication of survey materials by the Paperwork Reduction Act (PRA). These studies may involve identification of study participants; recruiting of study participants; obtaining institutional review board approval for the studies; collection of personal, indoor, and/or outdoor exposure measurement samples; collection of human biological samples; collection of questionnaire, activity, and survey data; analyses of samples; and analyses and reporting of results. Measurements may be performed for wide range of chemical classes and for other measurement parameters required to interpret the chemical measurements (e.g., meteorological parameters, air exchange rates). After all questionnaire and analytic results have been processed and validated, the contractor shall conduct statistical and other quantitative analyses of the results, and compare the results to relevant reference data. Measurement data, survey data, and other data collected in each study shall be provided to the EPA using EPA-approved formats.

4 Design, validate, and implement, in conjunction with field monitoring survey instruments, time-activity measurement methods, and other tools for characterizing activity patterns, frequency and duration of exposures, and temporal and spatial variability of exposures. Develop or refine survey methods for collecting time/activity pattern data, population demographics, physiological conditions, food consumption data, microenvironmental characteristics, and data on other factors that may affect exposures to environmental pollutants. When developing surveys, questionnaires, and/or activity pattern logs, the contractor shall consider the availability and use of instrumentation or other tools for electronically collecting and reporting these data.

5 Provide Institutional Review Board (IRB) approval for research involving human subjects requiring a human subjects review and clearance following procedures set forth in the 45 Code of Federal Regulations Part 46. Obtain annual IRB reviews and approvals as needed, and obtain IRB reviews of protocol amendments as needed. Provide to the EPA the information from human subjects reviews required for the EPA human subjects reviews and approvals. Provide review of scientific designs, protocols, or methods, for research integral to this contract, by outside nationally recognized experts with relevant publications in human and environmental exposure.



## **Attachment to Performance Work Statement**

### **Agency Security Requirements for Contractor Personnel**

To safeguard the EPA workforce and comply with Homeland Security Presidential Directive 12 (HSPD-12), Executive Order (E.O.) 13467, E.O. 13488 and Office of Personnel Management (OPM) regulations, the EPA requires the following:

- **For Unescorted Access for 6 Months or Less**

Contractor employees needing unescorted physical access to a controlled EPA facility<sup>1</sup> for 6 months or less must be determined by the EPA to be fit before being issued a physical access badge (picture ID). A fitness determination is, per E.O. 13488, a decision by an agency that an individual has or does not have the required level of character and conduct necessary to perform work for or on behalf of a federal agency as a contractor employee. A favorable fitness determination is not a decision to contract with an individual. Contractor employees must undergo, at a minimum, an FBI fingerprint check of law enforcement and investigative indices (see Section 2).

- **For Unescorted Access for More than 6 Months**

Contractor employees needing unescorted access to a controlled EPA facility for more than 6 months are required to have an HSPD-12 smart card, called an EPASS badge. Eligible contractor employees must have a completed or initiated background investigation at the National Agency Check and Inquiries (NACI) level or above, comply with all other investigative and HSPD-12-related requirements, and be determined by the EPA Personnel Security Branch (PSB) to be fit (see Section 3). “Initiated” means that all initial security requirements have been met (paperwork is completed, submitted, and PSB-approved; favorable fingerprint results have been received; funding has been provided to cover the cost of the investigation; and PSB has sent notification that the individual may begin work).

To ensure timely contract performance, the contractor must be prepared to immediately submit upon contract award the contractor employee information detailed in Section 1.c. This applies also to incumbent contractors’ employees for follow-on acquisitions. All contractor employees under a new contract are subject to the requirements in Sections 2 or 3; however, the time needed to meet security requirements may be shorter for personnel who already have a favorable fitness determination.

Contractor employees may begin work on the contract start date provided all applicable documentation in Sections 1, 2, and 3 has been received by the EPA and there is no derogatory information to preclude a favorable determination. Timely submission of contractor employees’ security forms and other required documentation is essential.

A favorable determination may be revoked at any time should the EPA discover derogatory information that deems a contractor employee unfit. Contractor employees deemed unfit will not be allowed to continue under the contract, and the contractor will be responsible for providing replacements acceptable to the EPA.

The EPA may make a determination of a contractor employee’s fitness at any of the following points:

- When the EPA prescreens the individual’s security forms. “Red flag” issues include:
  - Having been fired from a previous job or having left under unfavorable circumstances within the past 5 years (or longer, depending on the security form questions and type of investigation);
  - Failure to register with the Selective Service System (applies to male applicants born after December 31, 1959);
  - Within the past 5 years (or longer, depending on the security form questions and type of investigation), any arrest, charge, or conviction that has been upheld for violent or dangerous behavior or a pattern of arrests that demonstrates disregard for the law;

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<sup>1</sup> A controlled facility is an area to which security controls have been applied to protect agency assets. Entry to the controlled area is restricted to personnel with a need for access.

- Illegal drug use within the previous year, or drug manufacture or other involvement for profit within the past 5 years (or longer, depending on the security form questions and type of investigation).
- When FBI fingerprint results are returned to the EPA;
- When OPM returns the individual's investigative results to the EPA;
- When the EPA becomes aware that the contractor employee may not be fit to perform work for or on behalf of a federal agency. The contractor is responsible for monitoring its employees' fitness to work and notifying the EPA immediately of any contractor employee arrests or illegal drug use.

## 1) Initial Contractor Requirements

This section contains the contractor's initial security requirements, which must be met before contractor employees can perform work **on-site** at EPA under this contract.

- a) The contractor must identify a point of contact (POC) and alternate POC to facilitate security processes.
- b) The contractor must ensure that all foreign nationals who will work under this contract have a valid U.S. Immigrant Visa or nonimmigrant Work Authorization Visa. The contractor must use E-Verify to verify employment eligibility as required by the FAR.
- c) The EPA requires contractor employee information for the investigative and EPASS processes. Immediately upon contract award or anytime new personnel are brought onboard, the contractor POC must log on to a secure, EPA-identified portal, create an account, and submit complete contractor employee information: Full name (as found on employment records and driver's license), Social Security number, date of birth, place of birth (city, state, country), citizenship, employee email address, EPA Program Office or Regional Office, and EPA work city and state. Note: Incomplete names, inaccurate names, and nicknames are unacceptable and may delay contractor employees' start date. Instructions and the portal link will be provided upon contract award.
- d) EPA will provide the login information for the portal. After submission of the contractor employees' data, the Contracting Officer's Representative (COR) will notify the contractor POC if additional information or corrections are required. The COR's approval of the information triggers the investigative and EPASS processes.

## 2) Requirements for Contractor Employees Needing Unescorted Access for 6 Months or Less

This section contains the requirements for contractor employees who are not eligible for an EPASS badge but who need unescorted physical access. The minimum security requirement is an FBI fingerprint check.

- a) Before the contractor employee can begin work on-site at the EPA:
  - i) He/she must be fingerprinted by the EPA; arrangements will be made by the COR.
  - ii) The contractor employee must satisfactorily respond to all questions/information requests arising from the EPA's review of the fingerprint results.
  - iii) The EPA must determine that the fingerprint results are favorable.

Once all requirements in Section 2(a) are met, the COR/PO and contractor employee will be notified that the contractor employee can start work. Contractor employees will be issued a physical access badge and may work on-site at EPA. Contractor employees must sign a receipt acknowledging responsibility to safeguard the badge and surrender it when required (see Section 4.b).

## 3) Requirements for Contractor Employees Needing Unescorted Access for more than 6 Months

This section contains the requirements for contractor employees who are eligible for an EPASS badge and who must have, at a minimum, a NACI background investigation completed or initiated. Contractor employees needing access to sensitive information or otherwise occupying moderate or high-risk positions must undergo an investigation above the NACI level. The EPA will assign a position risk level to each position on the contract

and identify which contractor employees are EPASS-eligible.

- a) EPASS-eligible contractor employees must undergo a background investigation appropriate to the risk level of the position occupied, as specified by the EPA; the minimum acceptable investigation is a NACI.
- b) Employees who have previously undergone a federal background investigation at the required level and who have worked for or on behalf of the federal government without a break in service since the investigation was completed may not need a new investigation. The EPA will verify the investigative information and notify the contractor employee and COR if a new investigation is required. If an investigation is not needed, the contractor employee must still be fingerprinted by the EPA for an FBI fingerprint check and have favorable fingerprint results returned before beginning work on-site at EPA.
- c) Before beginning work on-site at the EPA, contractor employees who require a new background investigation must:
  - i) Complete and submit the appropriate OPM security questionnaire specified by the EPA via OPM's e-QIP system. Access to e-QIP will be provided by the EPA; the questionnaires are viewable at [www.opm.gov/forms](http://www.opm.gov/forms). Foreign national contractor employees must, on the security questionnaire, provide their alien registration number or the number, type, and issuance location of the visa used for entry to the United States.
  - ii) For a NACI only, also complete the OF 306, Declaration for Federal Employment, as required by OPM for any NACI and available at [http://www.opm.gov/forms/pdf\\_fill/of0306.pdf](http://www.opm.gov/forms/pdf_fill/of0306.pdf). Contractor employees must answer questions 1-13 and 16, then sign the form on the "Applicant" line, 17a.
  - iii) Follow all instructions on the form(s), answer all questions fully, and submit signature pages as directed by the EPA.
  - iv) Be fingerprinted by the EPA; arrangements for fingerprinting will be made by the COR.
  - v) Satisfactorily respond to all questions/information requests arising from the EPA's review of the forms or fingerprint results.
  - vi) Receive favorable fingerprint results.
- d) Once all requirements in Section 3(c) are met, the COR/PO and contractor employee will be notified that the contractor employee can start work. Contractor employees may work on-site at EPA while OPM conducts the background investigation.
- e) At a time and location specified by the EPA, contractor employees must report in person for EPASS identity (ID) proofing and show two unexpired forms of identification from the lists on Department of Homeland Security Form I-9. At least one of the documents must be a valid, unexpired state or federal government-issued photo ID; non-U.S. citizens must show at least one ID from Column A on Form I-9.
- f) Before being issued an EPASS badge, contractor employees must sign a receipt acknowledging responsibility to safeguard the badge and surrender it when required (see Section 4.b). Contractor employees must meet all EPASS badge life-cycle requirements.
- g) A contractor employee has the right to appeal, in writing through the contractor POC to the COR, the denial or revocation of an EPASS badge. If the COR believes the appeal is justified, he/she will forward it to the Security Management Division (SMD). SMD's decision on behalf of the EPA will be final.

#### **4) Ongoing Contractor Security Responsibilities**

- a) The contractor POC must immediately provide updated information via the secure portal when new contractor employees are added to the contract. These contractor employees must meet all initial investigative requirements before beginning work on-site at EPA. The contractor POC must also update information via the secure portal whenever a contractor employee leaves the contract.
- b) The contractor POC must ensure that all EPA physical access and EPASS badges are returned to the COR as soon as any of the following occurs, unless otherwise determined by the Agency: (i) when the badge is

no longer needed for contract performance; (ii) upon completion of a contractor employee's employment; (iii) upon contract completion or termination.

- c) These EPA security requirements must be incorporated into all resulting subcontracts wherein contractor personnel working under the subcontract require EPA physical access.



## **MEDICAL MONITORING PROGRAM**

Contractor personnel working on-site at the Laboratory shall be required to participate in the following medical monitoring program. Current employees shall have a baseline conducted previously and a follow-up examination within the past two years. New employees shall have Baseline Testing completed within sixty (60) days of their employment by the contractor.

### **1. Baseline (First Time)**

#### **A. Complete medical evaluation**

#### **B. Complete blood count (CBC) hematology profile**

- 1) White blood count (WBC)
- 2) Red blood count (RBC)
- 3) Hemoglobin (HGB)
- 4) Hematocrit (HCT)
- 5) Mean corpuscular volume (MCV)
- 6) Mean corpuscular hemoglobin (MCH)
- 7) Mean corpuscular hemoglobin concentration (MCHC)
- 8) Platelets

#### **C. Differential (Diff)**

#### **D. Sedimentation rate (Sed rat)**

#### **E. Blood chemistry profile (BCP) 12 channel**

- 1) Total protein
- 2) Albumin
- 3) Calcium
- 4) Phosphorus
- 5) Cholesterol
- 6) Glucose
- 7) Uric Acid
- 8) Creatinine
- 9) Total bilirubin
- 10) Alkaline phosphatase
- 11) Lactic dehydrogenase (LDH)
- 12) Transaminase (SGOT)

#### **F. Urinalysis**

#### **G. Pap test for female employees (optional)**

#### **H. Resting electrocardiogram (ECG)**

#### **I. Spirometry**

J. Audiometry

K. Chest x-ray/view

L. Visual testing as below

## 2. Follow-up Examinations

The following medical examination and testing shall be conducted on contractor on-site personnel every other year on the anniversary (within 30 days) of their previous baseline or follow-up examination.

### ROUTINE

A. Complete medical evaluation

B. Complete blood count (CBC) hematology profile

- 1) WBC
- 2) RBC
- 3) HGB
- 4) HCT
- 5) MCV
- 6) MCH
- 7) MCHC
- 8) Platelets

C. Differential

D. Sed rat

E. Blood chemistry profile 12 channel (same as baseline)

F. Urinalysis

G. Pap test for female employees (optional)

H. Audiometry for Operation and Maintenance employees

### VISUAL TESTING

A. Complete ophthalmologic examination (including refraction, acuity, and accommodation testing).

B. Tests for color vision function.

C. Examination of the cornea for lens capacity.

D. Examination of the retina for detachment.

The contractor shall submit a certification to the Project Officer for each employee which states that the above examinations were completed.

## Recapitulation of Funds

Contractor: JACOBS  
Contract No.: EP-C-15-008

## Recapitulation of Funding

### Option Period 3 - From 04/01/2018 to 03/31/2019

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Modification 0045	(b)(4)	(b)(4)	\$908,522.89
Modification 0046			\$0.00
Modification 0047			1,173,530.35
Modification 0048			-183,604.00
Modification 0052			100,000.00
Modification P00053			1,343,609.41
<b>Modification P00055</b>			239,000.00
<b>Total Funded</b>			<b>\$3,581,058.65</b>
<b>Total Per Contract</b>			<b>\$7,402,005.00</b>
<b>Balance Unfunded</b>			<b>\$3,820,946.35</b>

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1      7	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00056		See Block 16C		PR-CPOD-18-00077			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CPOD							
US Environmental Protection Agency							
26 West Martin Luther King Drive							
Mail Code: NWD							
Cincinnati OH 45268							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
JACOBS TECHNOLOGY INC.				9A. AMENDMENT OF SOLICITATION NO.			
Attn: Jeff Foster				9B. DATED (SEE ITEM 11)			
600 WILLIAM NORTHERN BLVD.							
P.O. BOX 884				10A. MODIFICATION OF CONTRACT/ORDER NO.			
TULLAHOMA TN 373880884				EP-C-15-008			
CODE 007923014				10B. DATED (SEE ITEM 13)			
FACILITY CODE				03/20/2015			
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)							
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) FAR 52.232-22, Limitation of Funds						
E. IMPORTANT: Contractor <input type="checkbox"/> is not. <input checked="" type="checkbox"/> is required to sign this document and return <u>1</u> copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007923014							
Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina							
Max Expire Date: 09/30/2019							
1) The purpose of this modification is to transfer funds from the Base Period to Option Period 2 in the amount of \$53,787.15, and to transfer funds from Option Period 1 to Option Period 2 in the amount of \$45,151.48, resulting in a total funds transfer to Option Period 2 in the amount of \$98,938.63. Details of these actions are shown below.							
2) Except for these changes, all other contract terms and conditions remain unchanged.							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Keith Pfeffer			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		07/03/2018	

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-15-008/P00056	PAGE	OF
		2	7

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>LIST OF CHANGES:</p> <p>Reason for Modification: Funding Only Action</p> <p>Total Amount for this Modification: \$0.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 1</p> <p>Obligated Amount for this Modification: -\$53,787.15</p> <p>CHANGES FOR ACCOUNTING CODE: 16-17-C-26UE000-102FK6XR2-2532-26A5D-1626UEE054-001 Amount changed from \$60,000.00 to \$6,212.85</p> <p>CHANGES FOR LINE ITEM NUMBER: 2</p> <p>Obligated Amount for this Modification: -\$45,151.48</p> <p>CHANGES FOR ACCOUNTING CODE: 16-E1-53GS-102A04-4183-1653PM6087-001 Amount changed from \$13,800.00 to \$6,895.45</p> <p>CHANGES FOR ACCOUNTING CODE: 15-E1-53GS-102A17-4183-1653PM6115-001 Amount changed from \$12,330.00 to \$6,561.79</p> <p>CHANGES FOR ACCOUNTING CODE: 16-17-C-26CF000-301FK8XPW-2532-26A6A-1626CFE141-001 Amount changed from \$28,000.00 to \$26,326.06 Percent changed from .23945 to .22513</p> <p>CHANGES FOR ACCOUNTING CODE: 16-17-C-26CF000-101FK6XR1-2532-26A6A-1626CFE117-001 Amount changed from \$141,590.82 to \$117,786.04 Percent changed from 1.21084 to 1.00727</p> <p>CHANGES FOR ACCOUNTING CODE: 17-E1-53GS-102A04-4183-1753PM7019-001 Amount changed from \$7,809.79 to \$809.79</p> <p>CHANGES FOR LINE ITEM NUMBER: 3</p> <p>Obligated Amount for this Modification: \$98,938.63</p> <p>CHANGES FOR ACCOUNTING CODE: Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00056	3	7

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>15-E1-53GS-102A17-4183-1653PM6115-001 Amount changed from \$30,000.00 to \$35,768.21</p> <p>CHANGES FOR ACCOUNTING CODE: 17-E1-53GS-102A04-4183-1753PM7019-001 Amount changed from \$42,190.21 to \$49,190.21</p> <p>CHANGES FOR ACCOUNTING CODE: 16-17-C-26CF000-301FK8XPW-2532-26A6A-1626CFE141-001 1 Amount changed from \$12,000.00 to \$13,673.94</p> <p>CHANGES FOR ACCOUNTING CODE: 16-17-C-26CF000-101FK6XR1-2532-26A6A-1626CFE117-001 1 Amount changed from \$83,409.18 to \$107,213.96</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 16-E1-53GS-102A04-4183-1653PM6087-001 Beginning FiscalYear 16 Ending Fiscal Year Fund (Appropriation) E1 Budget Organization 53GS Program (PRC) 102A04 Budget (BOC) 4183 Job # (Site/Project) Cost Organization DCN-LineID 1653PM6087-001 Quantity: 0 Amount: \$6,904.55</p> <p>CHANGES FOR ACCOUNTING CODE: 16-17-C-26UE000-102FK6XR2-2532-26A5D-1626UEE054-001 1 Amount changed from \$200,000.00 to \$253,787.15</p> <p>Section B, Clause EPA-32-101 is revised as follows:</p> <p>EPA-B-32-101 LIMITATION OF FUNDS NOTICE</p> <p>BASE PERIOD</p> <p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee. The amount allotted for costs is Continued ...</p>				

## CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
EP-C-15-008/P00056PAGE OF  
4 7NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>estimated to cover the contractors performance through March 31, 2016.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>(c) Recapitulation of Funds</p> <p>See attached.</p> <p>OPTION PERIOD 1</p> <p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee. The amount allotted for costs is estimated to cover the contractors performance through March 31, 2017.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>(c) Recapitulation of Funds</p> <p>See attached.</p> <p>OPTION PERIOD 2</p> <p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is allotted to cover estimated cost. Funding in the amount of (b)(4) is provided to cover the corresponding increment of fixed fee. The amount allotted for costs is estimated to cover the contractors performance through March 31, 2018.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>(c) Recapitulation of Funds</p> <p>Continued ...</p>				



NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	See attached.  FOB: Destination				

# Recapitulation of Funds

Contractor: JACOBS  
Contract No.: EP-C-15-008

## Recapitulation of Funding

**Base Period- From 04/01/2015 to 03/31/2016**

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Initial Award	(b)(4)	(b)(4)	\$100,000.00
Modification 001			\$3,224,943.80
Modification 002			-\$200,000.00
Modification 003			\$1,804,844.57
Modification 004			\$353,058.13
Modification 005			\$405,500.00
Modification 006			-\$35,755.41
Modification 007			\$304,755.41
Modification 008			\$79,699.45
Modification 009			-\$40,000.00
Modification 010			\$891,598.95
Modification 013			\$0.00
Modification 014			\$0.00
Modification 015			-\$240,000.00
Modification 016			\$255,000.00
Modification 024			-\$2,078,221.02
Modification 028			\$140,000.00
Modification 041			-\$15,000.00
<b>Modification P00056</b>			<b>-\$53,787.15</b>
<b>Total Funded</b>			<b>\$4,896,636.73</b>
<b>Total Per Contract</b>			<b>\$6,974,964.00</b>
<b>Balance Unfunded</b>			<b>\$2,078,327.27</b>

**Option Period 1 - From 04/01/2016 to 03/31/2017**

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Modification 012	(b)(4)	(b)(4)	\$1,070,692.70
Modification 013			\$0.00
Modification 014			\$0.00
Modification 015			\$240,000.00
Modification 017			\$3,299,138.58
Modification 018			\$1,031,389.00
Modification 019			\$1,320,480.00
Modification 020			\$1,984,698.90
Modification 021			\$109,799.00
Modification 022			-\$87,284.20
Modification 023			\$259,671.74
Modification 024			\$2,078,221.02
Modification 027			-\$817,477.63
Modification 028			-\$140,000.00
Modification 029			\$1,266,693.00
Modification 041			-\$1,474,921.20
Modification 042			\$0.00
<b>Modification P00056</b>			<b>-\$45,151.48</b>
<b>Total Funded</b>			<b>\$10,095,949.43</b>
<b>Total Per Contract</b>			<b>\$11,693,640.50</b>
<b>Balance Unfunded</b>			<b>\$1,597,691.07</b>

**Option Period 2 - From 04/01/2017 to 03/31/2018**

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Modification 0026	(b)(4)	(b)(4)	\$ 1,287,765.15
Modification 0027			\$ 817,477.63
Modification 0031			\$ 2,130,909.47
Modification 0032			\$ 1,063,754.05
Modification 0035			\$ 1,931,622.00
Modification 0036			\$ 91,484.00
Modification 0041			\$ 1,489,921.20
Modification 0043			\$ 1,726,496.75
Modification 0044			\$ (83,000.00)
Modification 0047			\$ 119,600.00
<b>Modification P00056</b>			<b>\$ 98,938.63</b>
<b>Total Funded</b>			<b>\$10,674,968.88</b>
<b>Total Per Contract</b>			<b>\$10,684,785.30</b>
<b>Balance Unfunded</b>			<b>\$9,816.42</b>

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1      9	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00057		See Block 16C		See Schedule			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CPOD							
US Environmental Protection Agency							
26 West Martin Luther King Drive							
Mail Code: NWD							
Cincinnati OH 45268							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-C-15-008			
				10B. DATED (SEE ITEM 13)			
				03/20/2015			
CODE 007923014		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$1,289,860.54	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) FAR 52.232-22, Limitation of Funds						
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not. <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007923014							
Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina							
Max Expire Date: 09/30/2019							
1) The purpose of this Modification is to provide incremental funding for Option Period 3. See attached Recapitulation of Funds sheet for details, as well as the below.							
2) Except for this change, all other contract terms and conditions remain unchanged.							
OPTION PERIOD 3							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Keith Pfeffer			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		07/03/2018	
NSN 7540-01-152-8070				STANDARD FORM 30 (REV. 10-83)			
Previous edition unusable				Prescribed by GSA			
				FAR (48 CFR) 53.243			

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-15-008/P00057	PAGE	OF
		2	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is obligated from estimated cost. Funds in the amount of (b)(4) are provided to cover the corresponding increment of fixed fee. The total cost plus fixed fee obligated is \$1,289,860.54. The amount allotted for costs is estimated to cover the contractors performance through 11/27/2018.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>LIST OF CHANGES:</p> <p>Total Amount for this Modification: \$1,289,860.54</p> <p>Obligated Amount for this Modification: \$1,289,860.54</p> <p>CHANGES FOR LINE ITEM NUMBER: 4</p> <p>Obligated Amount for this Modification: \$1,289,860.54</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR2-2532-26A6A-1826CFE040-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE040-001 Quantity: 0 Amount: \$3,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR1-2532-26A6A-1826CFE039-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00057	3	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Budget Organization 26CF000 Program (PRC) 000FK6XR1 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE039-001 Quantity: 0 Amount: \$15,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR1-2532-26A6A-1826CFE038-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR1 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE038-001 Quantity: 0 Amount: \$22,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR2-2532-26A6A-1826CFE036-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE036-001 Quantity: 0 Amount: \$32,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR1-2532-26A6A-1826CFE037-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR1 Continued ...				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00057	4	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE037-001 Quantity: 0 Amount: \$50,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26XN000-000FK9XR5-2574-26A5C-1826XNE050-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26XN000 Program (PRC) 000FK9XR5 Budget (BOC) 2574 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826XNE050-001 Quantity: 0 Amount: \$14,373.51  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26XF000-000FK6XR1-2574-26A5C-1826XFE039-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26XF000 Program (PRC) 000FK6XR1 Budget (BOC) 2574 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826XFE039-001 Quantity: 0 Amount: \$128,987.03  NEW ACCOUNTING CODE ADDED: Account code: 18-T-72BA-000DD2-2505-1872BJ5006-001 Beginning FiscalYear 18 Ending Fiscal Year Fund (Appropriation) T Budget Organization 72BA Program (PRC) 000DD2 Budget (BOC) 2505 Job # (Site/Project) HQ00BM00 Cost Organization Continued ...				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00057	5	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	DCN-LineID 1872BJ5006-001 Quantity: 0 Amount: \$30,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-2660000-000FK9XR6-2532-26A6A-182660E035-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 2660000 Program (PRC) 000FK9XR6 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 182660E035-001 Quantity: 0 Amount: \$150,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-53G6-000A59-2505-1853GP8024-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 53G6 Program (PRC) 000A59 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 1853GP8024-002 Quantity: 0 Amount: \$50,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-B-53G6-000A46-2505-1853GP8024-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) B Budget Organization 53G6 Program (PRC) 000A46 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 1853GP8024-001 Quantity: 0 Amount: \$100,000.00  Continued ...				

CONTINUATION SHEET	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00057	6	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-2660000-000FK9XR6-2509-26A5B-182660E039-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 2660000 Program (PRC) 000FK9XR6 Budget (BOC) 2509 Job # (Site/Project) LSMD0000 Cost Organization 26A5B DCN-LineID 182660E039-001 Quantity: 0 Amount: \$480,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-2660000-000FK9XR6-2509-26A5B-182660E039-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 2660000 Program (PRC) 000FK9XR6 Budget (BOC) 2509 Job # (Site/Project) LSMM0000 Cost Organization 26A5B DCN-LineID 182660E039-002 Quantity: 0 Amount: \$60,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK8XPV-2532-26A6A-1826UEE053-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK8XPV Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE053-001 Quantity: 0 Amount: \$17,500.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: Continued ...</p>				



<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00057	7	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	18-19-C-26CF000-000FK6XR2-2532-26A6A-1826CFE035-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE035-001 Quantity: 0 Amount: \$17,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-2660000-000FK9XR6-2509-26A5B-182660E039-003 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 2660000 Program (PRC) 000FK9XR6 Budget (BOC) 2509 Job # (Site/Project) LSMDSC00 Cost Organization 26A5B DCN-LineID 182660E039-003 Quantity: 0 Amount: \$60,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UH000-000FK8XPW-2532-26A5C-1826UHE032-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UH000 Program (PRC) 000FK8XPW Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826UHE032-001 Quantity: 0 Amount: \$34,000.00  NEW ACCOUNTING CODE ADDED: Account code: 17-18-B-C2A00EA-401C54-2505-18C2OPE003-001 Beginning FiscalYear 17 Continued ...				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00057	8	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Ending Fiscal Year 18</p> <p>Fund (Appropriation) B</p> <p>Budget Organization C2A00EA</p> <p>Program (PRC) 401C54</p> <p>Budget (BOC) 2505</p> <p>Job # (Site/Project)</p> <p>Cost Organization</p> <p>DCN-LineID 18C20PE003-001</p> <p>Quantity: 0</p> <p>Amount: \$26,000.00</p> <p>Delivery: 03/31/2019</p> <p>Delivery Location Code: CPOD</p> <p>CPOD</p> <p>US Environmental Protection Agency</p> <p>26 West Martin Luther King Drive</p> <p>Mail Code: NWD</p> <p>Cincinnati OH 45268 USA</p> <p>Payment:</p> <p>RTP Finance Center</p> <p>US Environmental Protection Agency</p> <p>RTP-Finance Center (AA216-01)</p> <p>109 TW Alexander Drive</p> <p><a href="http://www2.epa.gov/financial/contracts">www2.epa.gov/financial/contracts</a></p> <p>Durham NC 27711</p>				

## Recapitulation of Funds

Contractor: JACOBS  
Contract No.: EP-C-15-008

## Recapitulation of Funding

### Option Period 3 - From 04/01/2018 to 03/31/2019

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Modification 0045	(b)(4)	(b)(4)	\$908,522.89
Modification 0046			\$0.00
Modification 0047			1,173,530.35
Modification 0048			-183,604.00
Modification 0052			100,000.00
Modification P00053			1,343,609.41
Modification P00055			239,000.00
<b>Modification P00057</b>			<b>1,289,860.54</b>
<b>Total Funded</b>			<b>\$4,870,919.19</b>
<b>Total Per Contract</b>			<b>\$7,402,005.00</b>
<b>Balance Unfunded</b>			<b>\$2,531,085.81</b>



CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
EP-C-15-008/P00058

PAGE OF  
2 2

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>--</p> <p>Clause H-25 EPAAR 1552.237-72 KEY PERSONNEL. (APR 1984) is amended as follows:</p> <p>(a) The Contractor shall assign to this contract the following key personnel:</p> <p>P4 Program Manager: (b)(4)</p> <p>P4 Safety Officer: (b)(4)</p> <p>P4 Quality Assurance Officer: (b)(4)</p> <p>(b) During the first ninety (90) days of performance, the Contractor shall make no substitutions of key personnel unless the substitution is necessitated by illness, death, or termination of employment. The Contractor shall notify the Contracting Officer within 15 calendar days after the occurrence of any of these events and provide the information required by paragraph (c) of this clause. After the initial 90-day period, the Contractor shall submit the information required by paragraph (c) to the Contracting Officer at least 15 days prior to making any permanent substitutions.</p> <p>(c) The Contractor shall provide a detailed explanation of the circumstances necessitating the proposed substitutions, complete resumes for the proposed substitutes, and any additional information requested by the Contracting Officer. Proposed substitutes should have comparable qualifications to those of the persons being replaced. The Contracting Officer will notify the Contractor within 15 calendar days after receipt of all required information of the decision on substitutions. This clause will be modified to reflect any approved changes of key personnel.</p> <p>--</p> <p>Payment:</p> <p>RTP Finance Center US Environmental Protection Agency RTP-Finance Center Mail Drop D143-02 109 TW Alexander Drive Durham NC 27711</p>				

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 9	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00059		See Block 16C		See Schedule			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CPOD							
US Environmental Protection Agency							
26 West Martin Luther King Drive							
Mail Code: NWD							
Cincinnati OH 45268							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)		9A. AMENDMENT OF SOLICITATION NO.	
JACOBS TECHNOLOGY INC.							
Attn: Jeff Foster						9B. DATED (SEE ITEM 11)	
600 WILLIAM NORTHERN BLVD.							
P.O. BOX 884							
TULLAHOMA TN 373880884				x		10A. MODIFICATION OF CONTRACT/ORDER NO.	
						EP-C-15-008	
						10B. DATED (SEE ITEM 13)	
						03/20/2015	
CODE 007923014		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$1,134,869.00	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) FAR 52.232-22, Limitation of Funds						
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not. <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007923014							
Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina							
Max Expire Date: 09/30/2019							
1) The purpose of this Modification is to provide incremental funding for Option Period 3. See attached Recapitulation of Funds sheet for details, as well as the below.							
2) Except for this change, all other contract terms and conditions remain unchanged.							
OPTION PERIOD 3							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Keith Pfeffer			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		07/31/2018	
NSN 7540-01-152-8070				STANDARD FORM 30 (REV. 10-83)			
Previous edition unusable				Prescribed by GSA			
				FAR (48 CFR) 53.243			

## CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
EP-C-15-008/P00059PAGE OF  
2 9NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is obligated from estimated cost. Funds in the amount of (b)(4) are provided to cover the corresponding increment of fixed fee. The total cost plus fixed fee obligated is \$1,134,869.00. The amount allotted for costs is estimated to cover the contractors performance through 1/22/2019.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>LIST OF CHANGES:</p> <p>Total Amount for this Modification: \$1,134,869.00</p> <p>Obligated Amount for this Modification: \$1,134,869.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 4</p> <p>Obligated Amount for this Modification: \$1,134,869.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-264B000-000F72XPC-2532-26A6A-18264BE032-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 264B000 Program (PRC) 000F72XPC Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 18264BE032-001 Quantity: 0 Amount: \$29,460.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE062-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00059	3	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE062-001 Quantity: 0 Amount: \$100,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UC000-000FK6XR2-2532-26A6A-1826UCE023-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UC000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UCE023-001 Quantity: 0 Amount: \$42,700.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-56H6-000A61-2505-1856H8E044-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 56H6 Program (PRC) 000A61 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 1856H8E044-001 Quantity: 0 Amount: \$15,000.00  NEW ACCOUNTING CODE ADDED: Account code: 17-18-CR-26UUX01-102FK6XR2-2532-26A6A-1826UEEX17-001 Beginning FiscalYear 17 Ending Fiscal Year 18 Fund (Appropriation) CR Budget Organization 26UUX01 Program (PRC) 102FK6XR2 Budget (BOC) 2532 Continued ...				



<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00059	4	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEEX17-001 Quantity: 0 Amount: \$4,238.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-B-10B-000DA1-2505-1810BDR512-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) B Budget Organization 10B Program (PRC) 000DA1 Budget (BOC) 2505 Job # (Site/Project) Cost Organization DCN-LineID 1810BDR512-001 Quantity: 0 Amount: \$25,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-E1-53GS-000A04XPM-4183-1853PM8093-001 Beginning FiscalYear 18 Ending Fiscal Year Fund (Appropriation) E1 Budget Organization 53GS Program (PRC) 000A04XPM Budget (BOC) 4183 Job # (Site/Project) Cost Organization DCN-LineID 1853PM8093-001 Quantity: 0 Amount: \$51,471.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE061-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE061-001 Quantity: 0 Continued ...				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00059	5	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Amount: \$50,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR1-2532-26A6A-1826UEE060-001</p> <p>Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR1 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE060-001 Quantity: 0 Amount: \$88,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE060-002</p> <p>Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE060-002 Quantity: 0 Amount: \$37,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE059-001</p> <p>Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE059-001 Quantity: 0 Amount: \$46,000.00</p> <p>Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00059	6	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UH000-000FK8XPV-2532-26A5C-1826UHE036-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UH000 Program (PRC) 000FK8XPV Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826UHE036-001 Quantity: 0 Amount: \$80,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE066-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE066-001 Quantity: 0 Amount: \$125,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE065-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE065-001 Quantity: 0 Amount: \$11,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00059	7	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	18-19-C-26UE000-000FK6XR1-2532-26A6A-1826UEE065-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR1 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE065-002 Quantity: 0 Amount: \$105,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C3-264B000-000F72-2532-26A5D-18264BE030-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C3 Budget Organization 264B000 Program (PRC) 000F72 Budget (BOC) 2532 Job # (Site/Project) HQ00BG00 Cost Organization 26A5D DCN-LineID 18264BE030-001 Quantity: 0 Amount: \$200,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-264B000-000F72XPC-2532-26A5C-18264BE030-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 264B000 Program (PRC) 000F72XPC Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 18264BE030-002 Quantity: 0 Amount: \$125,000.00   Delivery: 03/31/2019 Delivery Location Code: CPOD CPOD Continued ...				

NAME OF OFFEROR OR CONTRACTOR  
 JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268 USA  Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711				

## Recapitulation of Funds

Contractor: JACOBS  
Contract No.: EP-C-15-008

## Recapitulation of Funding

### Option Period 3 - From 04/01/2018 to 03/31/2019

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Modification 0045	(b)(4)	(b)(4)	\$908,522.89
Modification 0046			\$0.00
Modification 0047			1,173,530.35
Modification 0048			-183,604.00
Modification 0052			100,000.00
Modification P00053			1,343,609.41
Modification P00055			239,000.00
Modification P00057			1,289,860.54
<b>Modification P00059</b>			<b>1,134,869.00</b>
<b>Total Funded</b>			<b>\$6,005,788.19</b>
<b>Total Per Contract</b>			<b>\$7,402,005.00</b>
<b>Balance Unfunded</b>			<b>\$1,396,216.81</b>

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES	
						1 9	
2. AMENDMENT/MODIFICATION NO.		3. EFFECTIVE DATE		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
P00060		See Block 16C		See Schedule			
6. ISSUED BY		CODE		7. ADMINISTERED BY (If other than Item 6)		CODE	
CPOD							
US Environmental Protection Agency							
26 West Martin Luther King Drive							
Mail Code: NWD							
Cincinnati OH 45268							
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)				(x)			
				9A. AMENDMENT OF SOLICITATION NO.			
				9B. DATED (SEE ITEM 11)			
				10A. MODIFICATION OF CONTRACT/ORDER NO.			
				EP-C-15-008			
				10B. DATED (SEE ITEM 13)			
				03/20/2015			
CODE 007923014		FACILITY CODE					
<b>11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS</b>							
<input type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers <input type="checkbox"/> is extended. <input type="checkbox"/> is not extended. Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.							
12. ACCOUNTING AND APPROPRIATION DATA (If required)				Net Increase:		\$1,288,272.00	
See Schedule							
<b>13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.</b>							
CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.						
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).						
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:						
X	D. OTHER (Specify type of modification and authority) FAR 52.232-22, Limitation of Funds						
<b>E. IMPORTANT:</b> Contractor <input checked="" type="checkbox"/> is not. <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.							
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)							
DUNS Number: 007923014							
Research Laboratory Support for the EPA Office of Research and Development (ORD) at Research Triangle Park (RTP), North Carolina							
Max Expire Date: 09/30/2019							
1) The purpose of this Modification is to provide incremental funding for Option Period 3. See attached Recapitulation of Funds sheet for details, as well as the below.							
2) Except for this change, all other contract terms and conditions remain unchanged.							
OPTION PERIOD 3							
Continued ...							
Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.							
15A. NAME AND TITLE OF SIGNER (Type or print)				16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print)			
				Keith Pfeffer			
15B. CONTRACTOR/OFFEROR		15C. DATE SIGNED		16B. UNITED STATES OF AMERICA		16C. DATE SIGNED	
(Signature of person authorized to sign)				 (Signature of Contracting Officer)		08/22/2018	
NSN 7540-01-152-8070				STANDARD FORM 30 (REV. 10-83)			
Previous edition unusable				Prescribed by GSA			
				FAR (48 CFR) 53.243			

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00060	2	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>(a) Pursuant to the Limitation of Funds clause, incremental funding in the amount of (b)(4) is obligated from estimated cost. Funds in the amount of (b)(4) are provided to cover the corresponding increment of fixed fee. The total cost plus fixed fee obligated is \$1,288,272.00. The amount allotted for costs is estimated to cover the contractors performance through 3/26/2019.</p> <p>(b) When the contract is fully funded as specified in the Estimated Cost and Fixed Fee Clause (EP 52.216-190), the Limitation of Cost clause shall become applicable.</p> <p>LIST OF CHANGES:</p> <p>Total Amount for this Modification: \$1,288,272.00</p> <p>Obligated Amount for this Modification: \$1,288,272.00</p> <p>CHANGES FOR LINE ITEM NUMBER: 4</p> <p>Obligated Amount for this Modification: \$1,288,272.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-T-D3D-000D72XPA-2505-18D3D18057-001 Beginning FiscalYear 18 Ending Fiscal Year Fund (Appropriation) T Budget Organization D3D Program (PRC) 000D72XPA Budget (BOC) 2505 Job # (Site/Project) HQ00BM00 Cost Organization DCN-LineID 18D3D18057-001 Quantity: 0 Amount: \$20,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-T-D3D-000D72-2505-18D3D17054-001 Beginning FiscalYear 18 Ending Fiscal Year Fund (Appropriation) T Budget Organization D3D Program (PRC) 000D72 Continued ...</p>				



<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00060	3	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	Budget (BOC) 2505 Job # (Site/Project) HQ00BM00 Cost Organization DCN-LineID 18D3D17054-001 Quantity: 0 Amount: \$73,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26US000-000FK6XR2-2532-26A6A-1826USE047-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26US000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826USE047-001 Quantity: 0 Amount: \$5,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE081-001 1 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE081-001 Quantity: 0 Amount: \$50,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-T-D3D-000D72XPC-2505-18D3D17052-001 Beginning FiscalYear 18 Ending Fiscal Year Fund (Appropriation) T Budget Organization D3D Program (PRC) 000D72XPC Budget (BOC) 2505 Job # (Site/Project) Cost Organization Continued ...				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED EP-C-15-008/P00060	PAGE	OF
		4	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	DCN-LineID 18D3D17052-001 Quantity: 0 Amount: \$10,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR1-2532-26A6A-1826CFE049-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR1 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE049-001 Quantity: 0 Amount: \$100,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR2-2532-26A6A-1826CFE049-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE049-002 Quantity: 0 Amount: \$65,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK7XR4-2532-26A5C-1826CFE049-003 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK7XR4 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826CFE049-003 Quantity: 0 Continued ...				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00060	5	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Amount: \$75,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK8XPV-2532-26A6A-1826CFE049-004</p> <p>Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK8XPV Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE049-004 Quantity: 0 Amount: \$60,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26UE000-000FK6XR2-2532-26A6A-1826UEE094-001</p> <p>Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26UE000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826UEE094-001 Quantity: 0 Amount: \$172,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR2-2532-26A6A-1826CFE046-001</p> <p>Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE046-001 Quantity: 0 Amount: \$85,000.00</p> <p>Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00060	6	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR2-2532-26A6A-1826CFE045-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE045-001 Quantity: 0 Amount: \$150,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR1-2532-26A6A-1826CFE048-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR1 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE048-001 Quantity: 0 Amount: \$30,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR1-2532-26A5C-1826CFE048-002 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR1 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A5C DCN-LineID 1826CFE048-002 Quantity: 0 Amount: \$10,000.00</p> <p>NEW ACCOUNTING CODE ADDED: Account code: Continued ...</p>				

<b>CONTINUATION SHEET</b>	REFERENCE NO. OF DOCUMENT BEING CONTINUED	PAGE	OF
	EP-C-15-008/P00060	7	9

NAME OF OFFEROR OR CONTRACTOR  
JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	18-19-C-26CF000-000FK6XR2-2532-26A6A-1826CFE048-003 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR2 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE048-003 Quantity: 0 Amount: \$60,000.00  NEW ACCOUNTING CODE ADDED: Account code: 18-T-31C-000DD2-2585-1831SFP009-001 Beginning FiscalYear 18 Ending Fiscal Year Fund (Appropriation) T Budget Organization 31C Program (PRC) 000DD2 Budget (BOC) 2585 Job # (Site/Project) HQ00BM00 Cost Organization DCN-LineID 1831SFP009-001 Quantity: 0 Amount: \$173,272.00  NEW ACCOUNTING CODE ADDED: Account code: 18-19-C-26CF000-000FK6XR1-2532-26A6A-1826CFE047-001 Beginning FiscalYear 18 Ending Fiscal Year 19 Fund (Appropriation) C Budget Organization 26CF000 Program (PRC) 000FK6XR1 Budget (BOC) 2532 Job # (Site/Project) Cost Organization 26A6A DCN-LineID 1826CFE047-001 Quantity: 0 Amount: \$150,000.00  Delivery: 03/31/2019 Delivery Location Code: CPOD CPOD Continued ...				

NAME OF OFFEROR OR CONTRACTOR  
 JACOBS TECHNOLOGY INC.

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	US Environmental Protection Agency 26 West Martin Luther King Drive Mail Code: NWD Cincinnati OH 45268 USA  Payment: RTP Finance Center US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts Durham NC 27711				

## Recapitulation of Funds

Contractor: JACOBS  
Contract No.: EP-C-15-008

## Recapitulation of Funding

### Option Period 3 - From 04/01/2018 to 03/31/2019

<u>Funding Action</u>	<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Cost Plus Fixed Fee</u>
Modification 0045	(b)(4)	(b)(4)	\$908,522.89
Modification 0046			\$0.00
Modification 0047			1,173,530.35
Modification 0048			-183,604.00
Modification 0052			100,000.00
Modification P00053			1,343,609.41
Modification P00055			239,000.00
Modification P00057			1,289,860.54
Modification P00059			1,134,869.00
<b>Modification P00060</b>			<b>1,288,272.00</b>
<b>Total Funded</b>			<b>\$7,294,060.19</b>
<b>Total Per Contract</b>			<b>\$7,402,005.00</b>
<b>Balance Unfunded</b>			<b>\$107,944.81</b>